

TRANSACTIONS

OF THE

Royal Society of Victoria.

Inaugural Address of the President, His Excellency SIR
HENRY BARKLY, K.C.B., &c., &c.

[Delivered to the Members of the Royal Society, at the Anniversary
Meeting held on the 10th April, 1860.]

GENTLEMEN OF THE ROYAL SOCIETY OF VICTORIA,

I AM conscious that my unanimous election to the office on which I to-night enter, was in nowise owing to the scientific qualifications you supposed me to possess, but to your desire, as Members of the late Philosophical Institute, to evince a grateful sense of Her Majesty's recent condescension, by thus making Her Representative your first President under the new style you have been permitted to assume.

In this view I felt I had no right to decline the proffered compliment, nor to shrink from the duties its acceptance

imposed, however unequal I knew myself to be to their efficient discharge.

“*Parcus scientiarum cultor et infrequens,*”

if I may be allowed so to paraphrase the confession of Horaec, it is indeed with the greatest diffidence that I rise to deliver the Inaugural Address expected from me on this occasion, and to treat of scientific questions in the presence of many so much more conversant with their details than I can pretend to be.

Most especially am I sensible of my unfitness to succeed one who has achieved so high a reputation in the scientific world as my predecessor in the Presidential Chair—Ferdinand Mueller—a man whose enthusiasm as a botanist is only surpassed by his industry as a writer, evidenced, despite the official demands on his time, by the publication, during his presidency, of several most useful works, of which I need only instance his “*Monographs of the Tropical Eucalypti, of the Australian Acacias, and of the Genus Eremophila ;*” his “*Enumeration of the Plants collected on the exploring expeditions of Gregory and of Babbage ;*” his invaluable “*Fragmenta Phytographiæ Australiæ,*” containing already the diagnoses of no less than 600 new or undescribed Australian plants; and above all his first sheets of the “*Flora of Victoria,*” a work which, when completed, will redound equally to the credit of the author, and of the Colony at whose expense it has been given to the world.

As through his zeal and perseverance, moreover, the Philosophical Institute has, during the past year, obtained a “*local habitation,*” as well as a change of name, and may now, therefore, be considered an established institution of the land, the present seems a fitting opportunity for me, when thus addressing you, to examine how far it has hitherto accomplished the objects for which it was founded, and to

consider by the light of past experience how its operations may in future be most beneficially conducted.

These objects were declared in 1855 (when two infant projects of a similar nature were amalgamated into the present Society), "to embrace the whole field of science, with special reference to the development of the natural resources of the country," the mode of effecting them having at the same time been defined to be "by original researches conducted by members, and original papers read and discussed at meetings."

I find that in accordance with the latter intention, not far short of one hundred Papers on points connected with Zoology, Botany, Geology, Astronomy, Meteorology, Engineering, and other branches of science both exact and inexact, have been, during the five years of its existence, read and discussed; and when I mention, not invidiously but for the sake of illustration, the names of Professors Wilson, McCoy, Hearn, and Neumayer; of Doctors Mueller and Becker; of Messrs. Selwyn and Brough Smyth, as among the contributors, I need hardly add that much has been thereby done for the advancement of scientific truth.

I would not ignore the fact that the Society has been occasionally criticised by the local press for the trivial nature of some of the topics brought forward, no less than for the asperity which has at times characterised its discussions. Such criticism need occasion little concern. If well founded, it can scarcely fail to lead to improvement. If unfair, it will in the long run fall harmless.

I am old enough to remember the attacks of the *Times* on the early proceedings of the British Association for the Advancement of Science; but witty and vivacious as were its sallies, they aided probably rather than retarded the subsequent triumphs of that noble scientific Congress.

We are in fact all of us too prone to despise such pursuits as lead to no visible or immediate good to society; but, as has been well remarked, "no serious study is without serious value to the human race," and a very little reflection will serve to show that the observation of facts cannot possibly be too minute or too accurate when we are engaged in investigating the mysterious and all but inscrutable laws of Nature.

Whilst I feel justified, however, in asserting that fair progress has been made towards realising one of the chief objects for which the Society has been instituted—namely, to elicit original communications on scientific subjects—I am, at the same time, free to confess that, looking to the many eminent names enrolled among its members, more, far more, of interest and importance might have been expected to be contained in the three volumes of its Transactions which have as yet seen the light.

My idea is, that the Society's Transactions ought to present a faithful and enduring record of the position and progress of scientific research in this country, and should set forth the most advanced views that its *savans* entertain on the great scientific questions of the day, more especially those affecting the development of our material resources. From some of these gentlemen, however, mere passing and fugitive contributions have been obtained; from others none at all; and so far from the Transactions reflecting the actual state of science in Victoria—of which there is, in my opinion, every reason to be proud—a stranger desirous of judging for himself on this point, would be obliged to gather scattered intimations of the labors of our scientific men from the reports of scientific bodies in Europe, from returns laid before the Legislature, or from even less accessible sources of information.

To devise a remedy for this inadequate representation of the state of science in our pages, may not be easy, but it will at any rate prove salutary to trace its causes.

There is in Victoria, I need hardly remind you, no class of noblemen and gentlemen, as at home, devoting ample fortunes to the cultivation of such scientific pursuits as please them, and possessing abundant leisure to communicate their discoveries to one another.

It is a melancholy fact, though one almost incidental to the paucity of our population and the newness of our society, that neither literary nor scientific teaching will, except in connection with posts of public emolument, enable even the most talented to earn a livelihood in this country. I need not cite instances; the experience of everybody will supply not a few. Hence it so happens that our leading scientific men have nearly all of them professional duties of more or less urgency to perform, and but little time at their disposal for the composition of papers not absolutely required by the State at their hands.

So far from blaming them for this, we are bound to feel the deepest obligation to them for transferring their labors to our shores. There is scarcely one of them who would not have obtained higher honors if not larger emoluments in the Old World, and who does not therefore remain to explore the wide field opened at the Antipodes from pure love of science.

It is natural that under such circumstances gentlemen should, when devoting their spare hours to describe the result of their observations, seek to influence as large a body of scientific readers as possible, and that they should, therefore, seldom address themselves to this Society, where the number of members who have turned their attention to any particular branch of knowledge is necessarily extremely limited. Hitherto, in fact, this paucity of members has constituted the great

obstacle to the introduction of a proper system of sectional division into our rules, and I fear no arrangement of the sort can work well until the number of cultivators of science is greatly augmented among us.

At the last meeting of the British Association, at Aberdeen, upwards of two thousand members were present, furnishing material for full attendance, and an intelligent auditory in every section.

Is it too much to anticipate that those throughout the Australian Colonies who take an interest in the advancement of science will, ere long, congregate in like manner in one or other of their Capital Cities every year?

We have intercolonial cricket matches for the development of the physical strength of our youth; champion races to test the fleetness of our horses. Why should we not have annual gatherings for the interchange of intellectual ideas? Into such an arena it would be worth the while of our scientific men to descend. The Geologists might there satisfactorily discuss the theory of the distribution of gold in its matrix; the Palaeontologists determine whether our coal fields were really of the Palaeozoic or Mesozoic era, or whether secondary formations have any place on the Australian Continent or not. But until we can hold out an inducement in this way, we can hardly hope for such disquisitions on the different species of Ammonites and Belemnites as we had the pleasure of listening to from Professor McCoy on the occasion of Dr. Hochstetter's recent lecture; nor be surprised that Mr. Selwyn should prefer to make known his theories through the journals of the Geological Society of Great Britain.

There is indeed another way in which this Society, whilst more directly than heretofore fulfilling its avowed object of developing the natural resources of the country, might entitle itself to the gratitude, and perhaps enlist the services of the

heads of our scientific departments, and that is, by enforcing from time to time their applications for pecuniary aid upon the Government and the Parliament.

I might, from the peculiarity of my public position, hesitate to refer more specifically to such a matter, had I not the high example of Prince Albert, who pointed this out to the British Association at Aberdeen, as one of the functions it was eminently fitted to discharge.

I entirely concur with His Royal Highness in thinking that it is well for every country to possess a body capable of justly appreciating the wants of science, and of speaking with authority whenever the national interests demand the expenditure of public money for scientific purposes.

I am aware that this Society has, on some particular occasions, done so, but I think it might safely carry the principle further; and when it is clear, for example, that the printing of the maps of the Geological Survey is delayed for want of funds: that the collection of minerals and fossils made to illustrate it lie useless, because neither space nor money is provided for their proper classification: that two or three hundred pounds would suffice for the publication of Meteorological and Astronomical Observations of the highest value made at the Flagstaff-hill Observatory: I hold it to be the duty of this Society to call public attention to the fact, and not to leave the officers concerned to supplicate for the requisite funds as if they had some private or personal interest to serve in obtaining them.

I am confident that if such desiderata were fairly made known on competent authority, there would be no disinclination on the part of the Ministry to propose the vote necessary for their immediate attainment; and no one looking at the annual Estimates, and seeing the scale on which many of our scientific establishments are provided for, can accuse the Legislature of a niggardly disposition in such matters. Were

it otherwise, with the political constitution under which we live, it is not on either that the blame would fall. Lord Bacon, indeed, lays down the doctrine, that whatever the form of Government may be, "the state of knowledge is ever a democracy, and that prevaileth which is most agreeable to the senses and conceits of the people."

If there be then no just appreciation of the labors of scientific men; if there exist unreasonable impatience that the practical results of their investigations are not more rapidly realised: the fault is chargeable on the entire community.

I would not willingly imply that this is the case among us here. Every credit is due, I must repeat, to the Legislature for the liberality it has in times past displayed in scientific matters. It has cause, I have already recorded my belief, to be proud of the results achieved. For my own part, when I peruse the encomiums passed in presence of learned societies at home, by so illustrious an authority as Sir Roderick Murchison, upon the labors of our Government Geologist and Palæontologist; or when I find so celebrated an astronomer as Mr. Hind congratulating the scientific world, through the columns of the *Times*, "That the essential instruments exist at Melbourne, in the hands of experienced Astronomers, for observing the transit of the newly discovered intra-mercurial planet over the sun's disc;" I feel, I confess, prouder of being the Governor of a colony which has attained this advanced stage of civilisation, than if I had a stately palace to dwell in, or barbaric hordes to bend the knee at my nod.

If I am anxious, as I have hinted, to see still further moderate expenditure for scientific purposes; if I long to know that the Southern Heavens are nightly swept with an eighteen-inch lens, instead of by our present comparatively powerless telescopes; it is because I am convinced that such

expenditure would in many respects be the truest economy, and that in others the fame which would accrue to the colony would far more than compensate for the immediate outlay.

Our present position in regard to scientific researches strikes me as not very dissimilar to that of some quartz-crushing Company on our gold fields, possessing stacks of auriferous stone ready to yield untold treasure, together with a first-rate battery of stampers, but begrudging the fuel requisite for working the steam-engine by which that battery is to be driven.

This Colony has gone to great expense in engaging the services of men of first-rate ability: it has provided each with certain apparatus suited to his vocation, or given him the aid of a costly staff. Having done this, will it be content to rest in ignorance of what is being accomplished, or delay, for the sake of a few extra thousands, the successful completion of their allotted tasks?

I have enlarged, gentlemen, at the risk of wearying you, upon this portion of my subject, because I am convinced that the Royal Society may do much to remedy such a state of things. It must, however, first of all, begin at the beginning, and acquire more of the confidence of the people than it at present commands. It must make science popular. Not in the false sense of that word. Not by patronising the exhibition of pretty tricks and ingenious experiments (though let me, in passing, observe I should be glad to hear lectures on scientific subjects, delivered by qualified lecturers, in our new Hall). Not by promoting the publication of cheap manuals and trashy guide books to science, in which facts are generalised until their individual significance is lost, and the student is persuaded that he can run before he really knows how to walk alone. Not by such means would I have you popularise the objects we have in view, but by teaching your fellow-colonists to believe in the earnestness of your purpose

and the sincerity of your endeavours to promote their welfare ; by inducing implicit reliance in the accuracy of your assertions, and inculcating the real value and utility of scientific truth.

I know that difficulties await any society of this kind in such a course. Even among the educated classes there are many who deride the notion of a Philosophical Institute, and though not ignorant of the derivative sense of the words, nor unwilling to boast themselves " friends of reason," or possessors of " knowledge," would only apply the name of " philosophers," or " men of science," to its members by way of taunt. That taunt is out of date, and futile. The revelations of the telescope on the one hand, and of the microscope on the other, so far from tending to exalt the pride of human reason, oppress man rather with a sense of utter insignificance. We have no longer, as in Shakspeare's day,

" Our philosophical persons to make modern
And familiar things supernatural and causeless."

Such dogmatic half-knowledge, such pretension to superior wisdom, have long since vanished before the more general diffusion of education, and the humility inspired by a wider acquaintance with the boundless realms open to scientific research ; and we find in their stead that our scientific men are anxious and painstaking inquirers after truth, careful recorders of the facts their own special course of study may reveal.

Another class of doubters as to the utility of the Royal Society's operations will be found in those who style themselves " par excellence" practical men.

Very little consideration should serve to show these, however, how enormously they benefit by the progress of scientific discovery, how ungratefully they too often appropriate its results with scarcely an acknowledgment.

Let any one who denies this read a pamphlet lately circulated, setting forth the claims of the Reverend Mr. Clarke, of New South Wales, in connection with the opening up of the mineral riches of Australia, wherein is clearly shown how valuable was this gentleman's geological skill in directing the first miners aright; how little even of the poor guerdon of thanks he has received from those who rushed afterwards to profit by his lessons.

Or to cite a less familiar instance. Look at one of the greatest boons conferred on all in these Colonies—the shortening of the voyage between them and the Mother Country. Is this due, as might naturally be inferred, to the practical navigator? Was it effected by chance or rule of thumb? On the contrary, the credit belongs almost solely to Lieutenant Maury, of the United States Observatory at Washington, by means of whose Wind and Current Charts, in which the laborious records of innumerable voyages are compiled, the average passage to Australia was almost immediately reduced from 124 to 97 days. I might allude, if time allowed, to the Electric Telegraph, and more especially to the Submarine Cable, inventions which could never have extended their incalculable blessings to our very shores, had the Science of Electricity not been brought to its present advanced state by the labors and experiments of unremembered and unrewarded *savans*; but I proceed to a third class of objectors to the study of Natural Philosophy, more difficult to deal with still, because their objections are founded on a vague though conscientious apprehension that it leads to scepticism in matters of religious belief.

This scruple is not new. It once extended even to the study of the Bible itself. Bacon found occasion to write—“Let no man, upon a weak conceit of sobriety, or an ill-applied moderation, think to maintain that a man can search too far, or be too well studied in the Book of God's Words, or

in the Book of God's Works ; but rather let him endeavor at endless progress and proficiencie in both." Yet, though silenced two centuries ago, it has of late, in consequence of the unexpected revelations of modern science, partially revived, and, if not often openly urged, creates strong prejudice against the speculations of Geology, Astronomy, and other inductive pursuits, in the minds of many sincere Christians.

To such I would with all respect submit—that any attempt to limit the scope of human inquiry must of necessity break down, whilst the mere desire to restrict it savors of want of faith in the truth of Divine Revelation.

To reconcile God's Works with God's Words may, it is possible, for ever transcend the faculties of mere humanity, but the believer may surely rest satisfied that what our present finite capacities cannot fathom, will one day be made clear, to all who have sought aright, in the mansions of eternity.

Convinced, in the words of the laurcate, "that God and Nature are not then at strife," let all echo the noble strain into which he bursts forth,—

"Who loves not knowledge? Who shall rail
Against her beauty? May she mix
With men and prosper! Who shall fix
Her pillars? Let her work prevail!"

But I must descend to less grand and exalted themes. To elevate the position of our Society to the extent I have indicated; to render it at the same time the depository of the opinions of the learned few, and the mouthpiece of the scientific wants of the unlearned many, are tasks for gradual accomplishment. I have to allude to-night to one or two matters which I should like to see occupy your special attention during my presidential term.

The first is the consideration of a scheme which has recently been proposed to the Government at home by my

enlightened compeer Sir William Denison, for the publication of the *Natural History*, using the term in its widest significance, of the British possessions throughout the world, at the joint expense of the Mother Country and the Colonies, the latter contributing the descriptive materials and scientific data, the former being at the expense of engraving the illustrations and editing the work.

A more comprehensive or imperial design cannot easily be imagined, and I am happy to state it has received the cordial approval of the Royal Society of Great Britain, to whom it was referred for report by the late Secretary of State for the Colonial Department. Should it be determined to carry it into execution, the co-operation of this Society will no doubt be invoked, and from the able manner in which some of its members have recently reported, at the instance of the Royal Society of Arts, on the productions of the Colony, I feel confident I may reckon on its aid to accelerate the scientific portion of the undertaking.

In the meanwhile, it is worthy of being considered whether, in any event, certain principles of uniformity might not be introduced into all official publications in this and the adjacent colonies, as has, I know, been attempted by the Registrar-General in regard to their statistics. A great deal of unnecessary trouble and expense, as well as of needless repetition, might thus be spared in the production of any great National Work hereafter.

There is a second subject of scientific interest which will I hope occupy a good deal of your attention during the ensuing twelvemonth—namely, the superintendence of preparations for the exploration of the interior.

I rejoice that this Colony is at length about to take its share in this important National duty. Our very presence here to night may be said to be attributable to the love of science and of maritime discovery which the Anglo-Saxon

race has always displayed; for you will remember that it was to observe the transit of Venus over the Sun that Captain Cook was despatched on his first voyage to the Southern Ocean, and but for his subsequent exploration of the east coast of Australia, this continent might never have been colonised by the British nation.

It seems but right, then, that this, the wealthiest and most civilised of the communities which have hence sprung into existence, should make some effort to advance the cause to which it owes its origin. Nor will that effort, I am persuaded, prove fruitless. We can gain, it is true, no extension of territory by the discoveries we may make, yet no inconsiderable commercial advantages must ultimately accrue to the possessors of the only great haven on the south coast, from the progress of internal settlement, and from opening up a practicable route to the northern shores of this vast continent; whilst a clearer insight into the nature and extent of the central desert cannot fail to elucidate phenomena now not easily explicable, and to complete our stores of information as to the Meteorology and Mineralogy, the Fauna and the Flora, of this most exceptional and extraordinary portion of the globe.

To this Society belongs the honor of first directing attention to the importance of such an expedition; it has subsequently—stimulated by the munificence of the anonymous donor of £1,000—raised a sum of nearly £3,000 towards this object, and has by its representations induced successive administrations to obtain from Parliament funds for the purchase of camels, as well as a further liberal grant of £6,000 to supplement the private subscription.

The Society must, therefore, feel the deepest anxiety for the successful issue of an undertaking to which it thus stands committed, and the Government has, in my opinion, acted wisely in resolving to leave its guidance and control to the

committee which has been appointed for the purpose, taking care, of course, that nothing is done without its knowledge, and that proper checks are imposed on the issue and disbursement of the money voted.

The committee has prudently decided that nothing shall be attempted during the approaching winter, which would have been too far spent ere the exploring party could have reached its starting point ; but I trust that every pains will be taken in the spring to organise and equip an expedition worthy of this colony, and that by the commencement of the ensuing summer it will be on its way, under a leader of approved ability, to the depôt selected upon Cooper's Creek as the basis of its operations, so as to be ready to take advantage of the first rains that may fall, to prosecute its researches.

The precise direction of these must necessarily be left a good deal to the discretion of the leader to be chosen. Were not something more than a mere bush ride across the continent aimed at, it might be the easiest course to proceed at once to the westward of Lake Torrens, where that daring veteran Stuart, and my no less gallant friend the Governor of South Australia, have already penetrated country which seems to promise a passage to the north. My own opinion has, however, always been in favor of directing the earlier efforts of the expedition to ascertaining the exact eastern limits of the Great Desert, with a view to crossing as directly as possible to the Gulf of Carpentaria, or to Arnheim's Land, the great promontory by which the western shore of that gulf is formed.

These, gentlemen, are the special questions on which I am chiefly desirous that your immediate attention should be bestowed.

You will not, I feel sure, suffer them to interfere with the zealous discharge of your ordinary duties as members of the Royal Society, but will, on the contrary, devote yourselves

with redoubled ardor to the task of rendering our monthly meetings profitable and agreeable. A noble field lies before us. There is ample room for all!

Let every one set earnestly to work in his own sphere for the advancement of science; he who never did so before taking up some branch in which more accurate knowledge is still desirable. Let those who find aught worthy of being communicated favor us with papers, to be discussed with moderation of language, and in entire oblivion of bygone bickerings. Let this be done, and we shall hardly fail to achieve results of importance; for, in the words of an eloquent writer on natural history in the *Cornhill Magazine*, "from the illumination of many minds on many points, truth must finally emerge." Association for scientific research is, in fact, no longer matter of choice, but of necessity. The collection and classification of facts is the essential element of modern progress, and it cannot be attained without division of labor and widespread publicity. In earlier stages of the world's history the brain of a single man, of an Aristotle or a Pliny, sufficed to comprehend all that was yet discovered regarding Nature, but such knowledge is now too vast to be grasped in sufficient clearness of detail by any individual intellect. Even the giant mind of Humboldt quailed before the task of giving a physical description of the universe, and confessed the completion of his "Cosmos," according to his original conceptions, to be impracticable.

True genius is indeed ever humble. The great Newton described himself towards the end of his career as having only gathered a few pebbles on the shores of a boundless ocean. Who in our day shall venture to boast of doing more than sift some grains of the sand which brims that ocean's shores? May we united pursue the path of scientific inquiry, in a like spirit of humility, and with an eye to truth alone.

“ Let knowledge grow from more to more,
Yet more of reverence in us dwell.”

May we, like them, whilst fearlessly scrutinising Nature's laws, cease not for a moment to respect the teachings of inspiration, nor forget to look from Nature up to Nature's God.

Long as I have already trespassed on your time, I cannot adequately give utterance to the feelings which I entertain on this head, without, in conclusion, adopting, in its integrity, the impressive language of one of the greatest orators and divines the New World has yet produced, Dr. Channing:—

“ I look with admiration on the intellectual force which combines and masters scattered facts, and by analysis and comparison ascends to the general laws of the material universe. But the philosopher who does not see in the force within him something nobler than the outward nature which he analyses—who, in tracing mechanical and chemical agencies, is unconscious of a higher action in his own soul—who is not led by all finite powers to the Omnipotent, and who does not catch, in the order and beauty of the universe, some glimpses of spiritual perfection—stops at the very threshold of the temple of truth.”